

Fuels Management: A Case Study of DoD Streamlining

by Mr Joe Draudt

Program Budget Directive (PBD) 735, 18 December 1991, directed the Air Force fuels functions be transferred to the Defense Fuels Supply Center (now Defense Energy Supply Center (DESC)), a part of the Defense Logistics Agency (DLA), by October 1993. The intent of **PBD 735** was to eliminate the Air Force fuels middleman and sell fuel directly from DLA to the wing-level customer. Elimination of a layer between the provider and the customer would improve customer service and reduce costs. The Air Force and DESC's goal was to ensure the transfer took place with no degradation in customer support and that a business process was in place to protect the customer.

It is now Fiscal Year 1999 and the Air Force fuels function still has not transferred to DESC. There is a possibility Air Force fuels will transfer at the beginning of Fiscal Year 2001. Why hasn't the fuels function transferred yet? Why will it take nine years or perhaps longer to accomplish the transfer? What is so difficult about accomplishing something that appears straight forward and will provide tangible benefits to the customer? A combination of planning problems, system development difficulties, and unforeseen circumstances worked in a perverse synergy to delay the fuels function transfer.

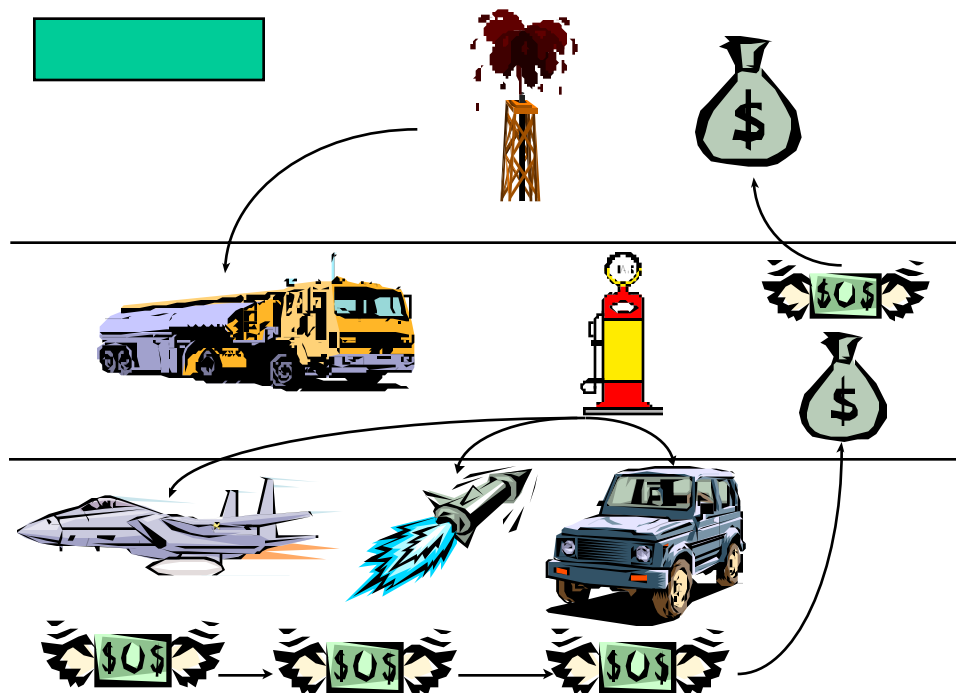
This article will explain the long and complex story of the Air Force fuels transfer. First the article discusses the nature of Air Force fuels and the change from decentralized inventory and centralized customer funding to centralized inventory and decentralized customer funding. Then the article turns to the specific functions of Air Force fuels. Next, the evolution of an integrated plan for consolidation of fuels functions at DLA is discussed and then development of the Fuels Automated System is reviewed. The article concludes with lessons learned and how we are applying those lessons to successfully complete the transfer of Air Force fuels to DESC.

Once upon a time...

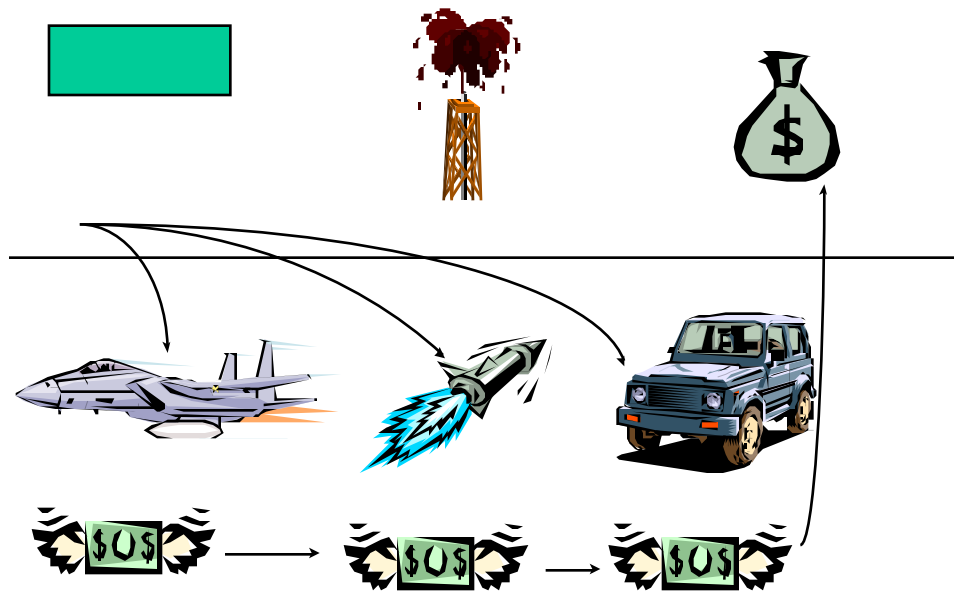
The Air Force fuels function is a part of the Air Force Working Capital Fund, formerly the Air Force Stock Fund. The idea behind the Air Force fuels stock fund was to buy fuel from DLA and resell the fuel to Air Force and other customers. Air Force fuels would buy and hold inventory and provide fuel to the customer at a stabilized rate. This would allow customers to plan and budget for a known price two years prior to actually purchasing the fuel. The stock fund assumed the risk of price fluctuations and acted as a buffer between the customer and the market price of fuel. The customer would eventually pay for the price fluctuations but the price increase or decrease would always be budget lead-time away.

The Air Force fuels function as originally conceived was based on decentralized inventory and centralized customer funding. This evolved to centralized inventory control and decentralized control of customer funds as the result of several DoD management initiatives. Centralization of inventory control reduces overhead costs and leads to increased efficiency. Decentralization of customer funding provides the wing-level customer with more control over how and where funds are spent. The changes in control of inventory and decentralized customer funding would have important implications to both DESC and the customer as a new business process was developed to support the transfer of Air Force fuel activity to DLA.

To better understand the fundamental changes caused by the DoD management initiatives consider a simple example of DESC as an oil refiner, Air Force fuels stock fund as a company owning many gas stations, and the wing commander as a customer of the local gas station. Under the old inventory and billing process the oil refiner (DESC) sold fuel to the gas station owner (Air Force fuels). The oil refiner was no longer concerned with the fuel once the fuel left the oil refinery. The oil refinery sent a single bill to the gas station owner and the gas station owner paid the oil refiner. The gas station owner distributed fuel to his many gas stations and kept track of how much fuel was available for sale. The gas station owner was responsible for billing and collecting from his customers who exclusively used credit cards to pay for gas.



Under the new process the oil refiner retains all of its' original responsibilities and takes on all of the responsibilities of the gas station owner. The oil refiner must transition from being responsible for inventory at the refinery (a wholesale operation) to being responsible for inventory and sales at the gas stations (a retail operation). The oil refiner must convert from having to bill and collect from a single customer to having to bill and collect from many customers. DESC (the oil refiner) did not have an existing business process or the necessary systems to take over the retail level process from Air Force fuels management activity (the gas station owner). It is necessary to know more about Air Force fuels to understand the challenge DESC faced in making the transition from a strictly wholesale operation to both wholesale and retail business processes.



“You can trust your flying boxcar to the man who wears the star”

The Directorate of Aerospace Fuels Management (SA-ALC/SFR), Kelly AFB, Texas manages the Fuels Division of the Air Force Supply Management Activity Group (SMAG). The Fuels Division is made up of aviation, ground, and missile fuels. Aviation and ground fuel support Air Force, Air National Guard, Air Force Reserve, other DoD and government agencies, commercial enterprises, foreign governments, and certain commercial operations. Missile fuels support NASA, Air Force, and commercial space launch programs in addition to the customers named above. The Fuels Division is also responsible for financial management, most product quality analytical laboratories, and some technical support.

The financial management of the Fuels Division requires working in partnership with DFAS-DE and OPLOCs worldwide to document fuels transactions and bill and collect for those transactions. Air Force aviation fuels transactions cover on-base, transient, in-flight, commercial, overseas bases, foreign governments, and overseas commercial aircraft. The number and variety of fuel transactions for Air Force aircraft presents a daunting task when trying to bill and collect thousands of times per month quickly and accurately.

Ground and missile fuels add to the complexity when factored into the equation. Ground fuels transactions cover all heating and motor fuels requirements at bases worldwide. Air Force fuels is the only agency in the United States dedicated to providing missile fuels to DoD, non-DoD, and commercial activities. Management of missile fuels carries the added responsibility of guarding against human and environmental hazards due to the volatility and toxicity of this type of fuel.

For many years the Fuels Division and DFAS accomplished the billing and collecting task using an ad hoc amalgamation of antiquated computer systems and manual transactions. The Air Force developed the Fuels Automated Management System (FAMS) to centrally compute transaction processing under a single functional manager to replace the outmoded transaction processing. FAMS processes approximately 300,000 sales transactions per month valued at about \$260 million. The development of FAMS was essential for the Air Force to implement DoD management initiatives requiring centralized inventory control and decentralized customer funding. Equally essential for the implementation of the Air Force fuels transfer to DLA was a plan to ensure continued customer support that included detailed billing and collection business processes.

If you don't know how you're getting there, it doesn't matter where you're going

The Air Force agreed in principle with PBD 735 but disagreed with the time frame and the structure of the transfer. The proposed time frame for completing the transfer by 1 October 1993 was too short to put into place the needed business processes and the supporting systems. Additionally, the transfer of the fuels function from the Air Force to DLA could not be worked in isolation. To achieve efficiencies and dollar savings the Air Force fuels transfer would have to be part of a larger, overall, coordinated plan for integrating fuels functions for all of the services. Subsequently, OSD agreed with the Air Force and DESC that a delay in the transfer was appropriate until an integrated plan addressing the fuel functions for all of the services could be developed. The plan acknowledged that each of the services perform internal mission-oriented responsibilities unrelated to the DLA mission. The mission-oriented responsibilities would be retained by the services while the inventory control point functions such as procurement, inventory management, and financial management would transfer to DLA.

Keep in mind the analogy of the oil refiner taking over the gas stations. DLA had the big challenge of learning the retail fuel business, selling fuel at the "gas station" level, and becoming familiar with the volume and type of transactions this required. Initially the support to accomplish the integration of the services fuel functions was to come from the existing automation systems. The Air Force Fuels Automated Management System (FAMS) would be used with the DESC Defense Fuels Automated Management System (DFAMS) and these systems would be modernized to accomplish the new mission. This effort was unsuccessful because there was no single organization responsible for accomplishing the combined system and process integration task. In addition, the Air Force and DLA initially disagreed on how the customer billing process would work.

In FY94 as the Services, DLA, and DFAS worked on trying to mesh these existing systems, it became clear that a new approach was needed. As a result, DLA established the Fuels Automated System (FAS) program office. DLA, in conjunction with the other services, would develop a unified petroleum management information system for all DoD fuels transactions. Control of the FAMS modernization effort would be placed under the control of the FAS program office. The transfer of the Air Force fuels function, as well as that of the other services, to DLA would be contingent on successful implementation and operation of FAS for one year.

Ya gotta have a system

FAS is to be the fuel transaction accounting, inventory, and billing system that allows DLA to assume full responsibility for fuel from the services and enable implementation of PBD 735. In other words, FAS allows the "oil refiner" to take over "gas station" operations. Personnel savings, operating efficiencies, and lower costs are promised as outcomes of FAS development. FAS is currently developing and fielding a base level data input process and a central transaction financial and inventory process. The base level ("gas station") system is functional and is approximately 90 percent deployed. Base level FAS was developed relatively quickly: it was based on the modernization of Air Force FAMS, a process that was revised and replaced with commercially available applications.

The development of the central processing transaction in FAS, or the Enterprise level operations, has taken longer than expected. FAS central processing would allow the "oil refiner" to bill and collect from the customers as well as or better than the former "gas station" owner. A commercial off the shelf (COTS) system that uses Oracle software was chosen to do the job because it would be the fastest and least expensive way to get FAS into operation and transfer fuel operations to DLA.

While the use of COTS enabled DESC to adopt proven, more efficient industry best practices that are embedded in COTS solutions, it did not fully meet DESC or customer requirements. The process for transmission of the requirements between the government parties and the system developer was ill-defined; there were requirements growth as well. Poor communication and requirements growth led to delays in development. To overcome the delay in development, DESC established a strategic partnership with the software providers, FAS developers, and management. This partnership overcame the poor communication between users and vendor. It ensured the user requirements were clearly defined and appropriate buy-in from the users and management occurred. The partnership itself is a mechanism to resolve business process issues as they occur.

The bottom line is that the ease of modifying the COTS package was overestimated and the required funds and time underestimated prior to the establishment of a viable partnership between the government and the COTS vendor. In PBD 425, DLA Supply Management, dated 4 December 1997, OSD expressed dissatisfaction with the progress and cost of FAS development and held funding contingent based on a mid-year program review. The funding has now been reinstated with the continued success of the ORACLE Enterprise delivered software and achievement of milestones. The delay in the FAS program also held ramifications for the old legacy systems that supported fuels but were in the process of being replaced.

You don't miss your water until your well has run dry

The Standard Base Supply System (SBSS) is a logistics system which processes a number of supply categories, one of which is fuels. SBSS was built in the early sixties as an integrated supply/accounting system. SBSS supports the full range of financial and inventory activities. The Integrated Logistics System - Supply (ILSS) was designed to replace the aging SBSS and was developed to accommodate all supply commodities except fuels. The reason fuels was excluded from ILSS was that FAS was expected to replace the SBSS function. ILSS is scheduled to start replacing the SBSS starting in 2000-2001.

The replacement of SBSS has implications on the financial systems supporting the Air Force fuels function. Air Force fuels will not be able to bill the customer without SBSS or FAS. The impact to the wing-level customer of not having a billing system could result in one of two undesirable possibilities. One possible outcome is to withdraw fuel funds control from the wing-level customer to a higher level in order to pay an aggregate level bill. The second possibility would result in the customer paying fuels bills without being able to validate the bill. Neither option is acceptable and the Air Force is committed to ensuring that an adequate billing process is in place to protect the customer.

In November of 1997 DLA and Air Force representatives met to develop an interim solution between the deployment of ILSS starting in 2000 and the deployment of FAS. Due to the high uncertainty of FAS development and deployment, a definitive solution to the potential ILSS/FAS gap has not been determined. As a contingency the Air Force and DLA have planned to retain the SBSS at a single site if FAS is not operational by December of 1999. However, the single site SBSS would not be able to operate past FY01 due to expense and loss of expertise in what will then be an obsolete system. The transfer of the fuels function to DLA was about to be further complicated by the BRAC decision to realign SA-ALC.

Oh my God, they've killed Kelly!

The Base Realignment and Closure (BRAC) Commission announced in August 1995 that Kelly AFB, Texas would be realigned. As a result, all Air Force Materiel Command (AFMC) operations on Kelly AFB would be transferred to other depots, privatized, or closed by the beginning of FY01. This meant that a decision regarding the future of the SA-ALC/SF organization located at Kelly AFB that performed the Air Force fuels function would have to be made. If the transfer to DLA did not occur before the BRAC date, SF would have to move off of Kelly AFB. However, if the Air Force fuels function transferred to DLA, DLA would have to decide which portions of SF to keep and where. The uncertainty of FAS development contributed to the difficulty of making a decision when SF should transfer to DLA. DLA and AFMC management were not only concerned with avoiding expenses of multiple SF moves but also with the morale of the SF employees. The SF personnel have been in a state of high uncertainty ever since the BRAC announcement was made. AFMC management wanted a decision on the issue so SF employees could start making future plans.

HQ USAF/ILS, DLA/DESC, and SA-ALC/SF determined in November 1998 the transfer of Air Force fuels to DLA would occur no earlier than 1 October 2000. This means the SF personnel at Kelly AFB will not transfer to DLA prior to the BRAC date. The delay in the transfer may necessitate moving the SF operation to comply with BRAC guidelines requiring all ALC activities to be off of Kelly AFB by July 2001. More than one move may be required before the operation is finally settled in its permanent location. This would disrupt service to the SF customers and entail moving expenses. Relocating the database and operational software alone is estimated at more than \$2 million. Add to that costs of employee permanent change of station, shipment of office and operational equipment and furniture, and potential leasing expense at a new facility and a much large cost picture emerges. Those cost would eventually be passed on to the customers in revised rates. The delay in the transfer and job transfer may seriously erode SF morale. As a result, HQ AFMC and HQ USAF/

ILS are taking steps to establish SF as a detachment or operating location attached to AFMC. This will allow SF to remain in place, reduce the uncertainty being experienced by SF employees, and keep the core of Air Force fuels expertise together and available to DLA when the transfer does occur in FY01.

You can't always get what you want but you know sometimes you get what you need

When the Air Force fuels function transfers to DLA on 1 October 2000 almost ten years will have elapsed between the PBD directing the transfer and the actual transfer. The anticipated outcomes of personnel savings, operating efficiencies, and lower costs promised to result from the transfer may have to be deferred pending the development of FAS. The lessons learned by the Air Force and DESC during the transfer of the fuels function may have general application to similar efforts in the future. The primary lessons learned are as follows :

1. Do not underestimate the scope and complexity of the mission transfer.
2. Beware the attractiveness of a COTS solution. Use of COTS offers speed of implementation and lower costs; however, be prepared to alter your existing business process or be prepared to sacrifice speed and lower cost if the COTS requires modification.
3. Remain flexible. Unforeseen events and events which were considered too distant at the time the transfer was originally conceived became major issues because the original plan was too rigid.

The Air Force, DESC, and DFAS have been working several actions which must occur for the fuels transfer to DLA to remain on track and achieve the envisioned savings and efficiencies. These actions include:

1. Develop and implement an interim system to be used if FAS is not operational by the planned transfer date. This includes development of a single node SBSS for Air Force fuels only. The single node SBSS will bridge the gap that may be created between the shut down of the SBSS and FAS implementation.
2. Continue shoulder-to-shoulder partnering with the contractor to resolve issues concerning FAS implementation and certification.
3. Establish a fuels detachment or operating location under HQ AFMC to keep Air Force fuels expertise in place and available to DESC when the transfer occurs. In addition, establishment of the detachment or operating location will mitigate the impact of the BRAC decisions on personnel currently providing fuels support to the Air Force.

The interim plan will take care of immediate concerns and buy time to recover from FAS implementation and deployment delays. The Air Force and DESC are intent on ensuring customer support and a business process are in place to protect the customer. A final dedicated effort will achieve the original vision of reduced cost and improved customer service. There is a light at the end of the tunnel and it is coming up FAS.

About the Author

Mr Joe Draudt is the Acting Assistant for Revolving Funds, Directorate for Management Execution, Deputy Assistant Secretary, Budget (SAF/FMBMR). He has a BA in History from the University of New Mexico and an MBA in Management from Wright State University. Mr Draudt has held a variety of positions before joining FMBMR, the last of which was budget analyst at HQ AFMC, Wright-Patterson AFB OH.

